

# LOW-IMPEDANCE DRIVER

#### FEATURES

- 290ps propagation delay
- $\blacksquare$  Dual outputs for 25  $\Omega$  drive applications
- Internal 75KΩ input pull-down resistors
- Available in 8-pin SOIC package

#### DESCRIPTION

The SY10/100EL12 are low-impedance drive buffers. With two pairs of OR/NOR outputs, the devices are ideally suited for high drive applications such as memory addressing. These devices are functionally equivalent to the E112 devices, with higher performance capabilities. With propagation delays significantly faster than the E112, the EL12 is ideally suited for those applications which require the ultimate in AC performance.

### PIN CONFIGURATION/BLOCK DIAGRAM



TOP VIEW

#### PIN NAMES

| Pin    | Function     |
|--------|--------------|
| D0, D1 | Data Inputs  |
| Qa, Qb | Data Outputs |

# DC ELECTRICAL CHARACTERISTICS

VEE = VEE (Min.) to VEE (Max.); VCC = GND

|        |                      | TA = −40°C |      | Т    | TA = 0°C |      |      | TA = +25°C |      |      | TA = +85°C |      |      |      |
|--------|----------------------|------------|------|------|----------|------|------|------------|------|------|------------|------|------|------|
| Symbol | Parameter            | Min.       | Тур. | Max. | Min.     | Тур. | Max. | Min.       | Тур. | Max. | Min.       | Тур. | Max. | Unit |
| IEE    | Power Supply Current |            |      |      |          |      |      |            |      |      |            |      |      | mA   |
|        | 10EL                 | —          | 14   | 17   | 11       | 14   | 17   | 11         | 14   | 17   | 11         | 14   | 17   |      |
|        | 100EL                |            | 14   | 17   | 11       | 14   | 17   | 11         | 14   | 17   | 13         | 16   | 20   |      |
| Vee    | Power Supply Voltage |            |      |      |          |      |      |            |      |      |            |      |      | V    |
|        | 10EL                 | -4.75      | -5.2 | -5.5 | -4.75    | -5.2 | -5.5 | -4.75      | -5.2 | -5.5 | -4.75      | -5.2 | -5.5 |      |
|        | 100EL                | -4.20      | -4.5 | -5.5 | -4.20    | -4.5 | -5.5 | -4.20      | -4.5 | -5.5 | -4.20      | -4.5 | -5.5 |      |
| Ін     | Input HIGH Current   | —          | —    | 150  | —        |      | 150  | —          |      | 150  | —          | —    | 150  | μA   |

### **AC ELECTRICAL CHARACTERISTICS**

#### VEE = VEE (Min.) to VEE (Max.); VCC = GND

|              |                                       | TA = −40°C |      | TA = 0°C |      |      | TA = +25°C |      |      | TA = +85°C |      |      |      |      |
|--------------|---------------------------------------|------------|------|----------|------|------|------------|------|------|------------|------|------|------|------|
| Symbol       | Parameter                             | Min.       | Тур. | Max.     | Min. | Тур. | Max.       | Min. | Тур. | Max.       | Min. | Тур. | Max. | Unit |
| tPLH<br>tPHL | Propagation Delay to<br>Output D      | 120        | 280  | 500      | 170  | 280  | 450        | 180  | 290  | 450        | 210  | 320  | 480  | ps   |
| tr<br>tf     | Output Rise/Fall Times Q (20% to 80%) | 150        | 350  | 550      | 150  | 350  | 550        | 150  | 350  | 550        | 150  | 350  | 550  | ps   |

# **PRODUCT ORDERING CODE**

| Ordering<br>Code | Package<br>Type | Operating<br>Range | Package<br>Marking |  |  |
|------------------|-----------------|--------------------|--------------------|--|--|
| SY10EL12VZC      | Z8-1            | Commercial         | HEL12              |  |  |
| SY10EL12VZCTR*   | Z8-1            | Commercial         | HEL12              |  |  |
| SY100EL12VZC     | Z8-1            | Commercial         | XEL12              |  |  |
| SY100EL12VZCTR*  | Z8-1            | Commercial         | XEL12              |  |  |

| Ordering<br>Code            | Package<br>Type | Operating<br>Range | Package<br>Marking |
|-----------------------------|-----------------|--------------------|--------------------|
| SY10EL12VZI <sup>(1)</sup>  | Z8-1            | Industrial         | HEL12              |
| SY10EL12VZITR*(1)           | Z8-1            | Industrial         | HEL12              |
| SY100EL12VZI <sup>(1)</sup> | Z8-1            | Industrial         | XEL12              |
| SY100EL12VZITR*(1)          | Z8-1            | Industrial         | XEL12              |

\* Tape and Reel

Note 1. Recommended for new designs.

\* Tape and Reel

## 8 LEAD SOIC .150" WIDE (Z8-1)



#### MICREL, INC. 1849 FORTUNE DRIVE SAN JOSE, CA 95131 USA

тец + 1 (408) 944-0800 FAX + 1 (408) 944-0970 web http://www.micrel.com

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